

IN THE SPECIFICATION:

Please replace the paragraph beginning at line 12 on page 4 with the following paragraph:

A¹
Referring now to Figure 1, there is illustrated generally at 10 a communication network having a single residential multi-line modem 12 serving a remote terminal ~~[[RT]]~~ 13 and adapted to communicate with a corresponding central office (CO) modem 14 serving a communications terminal 15 at a central office 16 via a master loop 18 comprising a conventional twisted pair telephone line. Advantageously, the multi-line modem (RT) 12 is also adapted to share adjacent loops 20 and 22 connected to the common central office 16 and serving other residential customers which may be served by a single line modem 24, a multi-line modem 12, or just a Plain-Old-Telephone-System (POTS) device 26 such as phone set or fax machine.

Please replace the paragraph beginning at line 21 on page 4 with the following paragraph:

A²
As shown in Figure 1, the multi-line modem 12 is seen to be connected to the respective master loop 18, while also being connected through a high-pass filter 30 to each of the shared loops 20 and 22 to separate out low frequency communications, such as voice communications, resident on the shared loops from the multi-line ~~terminal~~ modem 12. As shown in Figure 1 the multi-line terminal 12 is connected to two other shared loops 20 and 22 serving nearby residential customers which are primarily served by different respective CO modems 14 located at the same and common central office 16. Although two additional shared loops are shown to be connected to the multi-line modem 12, it is envisioned that only one shared loop, or more than two shared loops, may be connected thereto depending on the desired bandwidth to be available to a customer served by the multi-line modem 12. As illustrated in Figure 1, the bandwidth of the communication between a user of multi-line modem 12 is increased at least threefold to provide a significantly greater burst data rate over a single loop.

↓
Please replace the paragraph beginning at line 8 on page 5 with the following paragraph:

A3 Referring now to Figure 2, there is illustrated in more detail communication network 10 illustrating a frequency splitter 32 being provided for each standard user having both a customer premise network 34 and having a telephone set, voice-band modem or ISDN terminal 36. Advantageously, a frequency splitter 38 is provided to service the multi-line modem 12. Splitter 38 has a low pass filter 40 and high pass filter 42 servicing and connected to the master loop 18, whereby the low frequency signals are separated out by the low pass filter 40 to the telephone set, voice-band modem, or ISDN terminal 36, and the high pass filter 42 splitting the high frequency signals to the multi-line modem 12. An additional high pass filter 44 is provided in splitter 38 to separate out the high frequency signals of each of the shared loops 20 and 22 for communication to the multi-line modem 12. The high pass filters 42 and 44 provide the high frequency components of both the master loop 18 as well as the shared loops 20 and 22 such that they are all available via the multi-line ~~receiver~~ modem 12 to the high data rate customer premise network shown at 46.

Please replace the paragraph beginning at line 22 on page 5 with the following paragraph:

AH A corresponding splitter 50 is provided at the central office 16 at the opposing end of the respective loop to separate the low frequency signals via a low pass filter 52 to a narrowband network 54, and the high frequency signals via a high pass filter 56 to a broadband network 58. The combination of the splitters 50 and the corresponding splitters 32 and 38 direct the broadband network communications over the respective loops to the customer premise networks, with the communications of the narrowband networks communications being directed to the terminals 36 ~~and 46~~. Advantageously, the high pass filters 42 and 44 separate out the low frequency voice band signals ~~for~~ from the shared loop signals ~~from~~ for minimum interference. The shared loops may be configured to serve a single line modem, or a multi-line modem, or simply a POTS device such as a phone set or fax machine. The respective high pass filters for the respective modem minimize the interference between the voice band signals and the ADSL band signals.

)
Please replace the paragraph beginning at line 4 on page 6 with the following paragraph:

A5
The multi-line ~~receiver~~ modem 12 advantageously shares one or more other loops serving other customer terminals, without causing interference with the respective voice band signals, such that the improved customer premise network 46 served by the multi-line modem ~~[[38]]~~ 12 achieves a significantly higher data transmission rate than that achievable with only one twisted pair of conductors forming the master loop 18.

TI-28221 - 4 -